

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Please cancel claims 61 and 63 without prejudice or disclaimer of the subject matter contained therein.

Listing of Claims:

1. (Currently Amended) A method practiced by a computer system of well planning in a well planning system in response to input data including wellbore geometry and wellbore trajectory requirements, the wellbore including one or more hole sections, comprising the step of:

generating a summary of a drillstring in each hole section of a wellbore in response to said input data, the summary providing a drillstring design for the wellbore geometry of each hole section of the wellbore; and

recording or displaying at least a portion of said summary of said drillstring in said each hole section of said wellbore on a recorder or display device.

2. (original) The method of claim 1, wherein the step of generating a summary of a drillstring in each hole section of a wellbore comprises the step of:

generating an outer diameter of a first drill collar of said drillstring.

3. (Previously Presented) The method of claim 1, wherein the step of generating a summary of a drillstring in each hole section of a wellbore further comprises the step of:

generating an outer diameter of a second drill collar of said drillstring.

4. (original) The method of claim 1, wherein the step of generating a summary of a drillstring in each hole section of a wellbore further comprises the step of:

generating an outer diameter of a heavy weight of said drillstring.

5. (original) The method of claim 1, wherein the step of generating a summary of a drillstring in each hole section of a wellbore further comprises the step of:

generating an outer diameter of a drill pipe of said drillstring.

6. (original) The method of claim 1, wherein the step of generating a summary of a drillstring in each hole section of a wellbore further comprises the step of:

generating a maximum weight of a weight-on-bit in each hole section of said drill string.

7. (original) The method of claim 1, wherein the step of generating a summary of a drillstring in each hole section of a wellbore further comprises the step of:

generating a weight of a first drill collar of said drillstring.

8. (original) The method of claim 1, wherein the step of generating a summary of a drillstring in each hole section of a wellbore further comprises the step of:

generating a weight of a second drill collar of said drillstring.

9. (original) The method of claim 1, wherein the step of generating a summary of a drillstring in each hole section of a wellbore further comprises the step of:

generating a weight of a heavy weight of said drillstring.

10. (original) The method of claim 1, wherein the step of generating a summary of a drillstring in each hole section of a wellbore further comprises the step of:

generating a length of a first drill collar of said drillstring.

11. (Previously Presented) The method of claim 1, wherein the step of generating a summary of a drillstring in each hole section of a wellbore further comprises the step of:

generating a length of a second drill collar of said drillstring.

12. (original) The method of claim 1, wherein the step of generating a summary of a drillstring in each hole section of a wellbore further comprises the step of:

generating a length of a heavy weight of said drillstring.

13. (original) The method of claim 1, wherein the step of generating a summary of a drillstring in each hole section of a wellbore further comprises the step of:

generating a length of a drill pipe of said drillstring.

14. (original) The method of claim 1, wherein the step of generating a summary of a drillstring in each hole section of a wellbore further comprises the step of:

generating a tensile risk of said drillstring.

15. (original) The method of claim 1, wherein the step of generating a summary of a drillstring in each hole section of a wellbore further comprises the step of:

generating a cost figure associated with said drillstring.

16. (original) The method of claim 1, wherein the step of generating a summary of a drillstring in each hole section of a wellbore further comprises the step of:

generating a kick tolerance associated with said drillstring.

17. (original) The method of claim 2, wherein the step of generating a summary of a drillstring in each hole section of a wellbore further comprises the step of:

generating an outer diameter of a second drill collar of said drillstring.

18. (original) The method of claim 17, wherein the step of generating a summary of a drillstring in each hole section of a wellbore further comprises the step of:

generating an outer diameter of a heavy weight of said drillstring.

19. (original) The method of claim 18, wherein the step of generating a summary of a drillstring in each hole section of a wellbore further comprises the step of:

generating an outer diameter of a drill pipe of said drillstring.

20. (original) The method of claim 19, wherein the step of generating a summary of a drillstring in each hole section of a wellbore further comprises the step of:

generating a maximum weight of a weight-on-bit in each hole section of said drill string.

21. (original) The method of claim 20, wherein the step of generating a summary of a drillstring in each hole section of a wellbore further comprises the step of:

generating a weight of a first drill collar of said drillstring.

22. (original) The method of claim 21, wherein the step of generating a summary of a drillstring in each hole section of a wellbore further comprises the step of:

generating a weight of a second drill collar of said drillstring.

23. (original) The method of claim 22, wherein the step of generating a summary of a drillstring in each hole section of a wellbore further comprises the step of:

generating a weight of a heavy weight of said drillstring.

24. (original) The method of claim 23, wherein the step of generating a summary of a drillstring in each hole section of a wellbore further comprises the step of:

generating a length of a first drill collar of said drillstring.

25. (original) The method of claim 24, wherein the step of generating a summary of a drillstring in each hole section of a wellbore further comprises the step of:

generating a length of a second drill collar of said drillstring.

26. (original) The method of claim 25, wherein the step of generating a summary of a drillstring in each hole section of a wellbore further comprises the step of:

generating a length of a heavy weight of said drillstring.

27. (original) The method of claim 26, wherein the step of generating a summary of a drillstring in each hole section of a wellbore further comprises the step of:

generating a length of a drill pipe of said drillstring.

28. (original) The method of claim 27, wherein the step of generating a summary of a drillstring in each hole section of a wellbore further comprises the step of:

generating a tensile risk of said drillstring.

29. (original) The method of claim 28, wherein the step of generating a summary of a drillstring in each hole section of a wellbore further comprises the step of:

generating a cost figure associated with said drillstring.

30. (original) The method of claim 29, wherein the step of generating a summary of a drillstring in each hole section of a wellbore further comprises the step of:

generating a kick tolerance associated with said drillstring.

31. (Currently Amended) A program storage device readable by a machine tangibly embodying a program of instructions executable by the machine to perform method steps which are practiced by a computer system for well planning in a well planning system in response to input data including wellbore geometry and wellbore trajectory requirements, the wellbore including one or more hole sections, said method steps comprising:

generating a summary of a drillstring in each hole section of a wellbore in response to said input data, the summary providing a drillstring design for the wellbore geometry of each hole section of the wellbore; and

recording or displaying at least a portion of said summary of said drillstring in said each hole section of said wellbore on a recorder or display device.

32. (original) The program storage device of claim 31, wherein the step of generating a summary of a drillstring in each hole section of a wellbore comprises the step of:

generating an outer diameter of a first drill collar of said drillstring.

33. (Previously Presented) The program storage device of claim 31, wherein the step of generating a summary of a drillstring in each hole section of a wellbore further comprises the step of:

generating an outer diameter of a second drill collar of said drillstring.

34. (original) The program storage device of claim 31, wherein the step of generating a summary of a drillstring in each hole section of a wellbore further comprises the step of:

generating an outer diameter of a heavy weight of said drillstring.

35. (original) The program storage device of claim 31, wherein the step of generating a summary of a drillstring in each hole section of a wellbore further comprises the step of:

generating an outer diameter of a drill pipe of said drillstring.

36. (original) The program storage device of claim 31, wherein the step of generating a summary of a drillstring in each hole section of a wellbore further comprises the step of:

generating a maximum weight of a weight-on-bit in each hole section of said drill string.

37. (original) The program storage device of claim 31, wherein the step of generating a summary of a drillstring in each hole section of a wellbore further comprises the step of:

generating a weight of a first drill collar of said drillstring.

38. (original) The program storage device of claim 31, wherein the step of generating a summary of a drillstring in each hole section of a wellbore further comprises the step of:

generating a weight of a second drill collar of said drillstring.

39. (original) The program storage device of claim 31, wherein the step of generating a summary of a drillstring in each hole section of a wellbore further comprises the step of:

generating a weight of a heavy weight of said drillstring.

40. (original) The program storage device of claim 31, wherein the step of generating a summary of a drillstring in each hole section of a wellbore further comprises the step of:

generating a length of a first drill collar of said drillstring.

41. (Previously Presented) The program storage device of claim 31, wherein the step of generating a summary of a drillstring in each hole section of a wellbore further comprises the step of:

generating a length of a second drill collar of said drillstring.

42. (original) The program storage device of claim 31, wherein the step of generating a summary of a drillstring in each hole section of a wellbore further comprises the step of:

generating a length of a heavy weight of said drillstring.

43. (original) The program storage device of claim 31, wherein the step of generating a summary of a drillstring in each hole section of a wellbore further comprises the step of:

generating a length of a drill pipe of said drillstring.

44. (original) The program storage device of claim 31, wherein the step of generating a summary of a drillstring in each hole section of a wellbore further comprises the step of:

generating a tensile risk of said drillstring.

45. (original) The program storage device of claim 31, wherein the step of generating a summary of a drillstring in each hole section of a wellbore further comprises the step of:

generating a cost figure associated with said drillstring.

46. (original) The program storage device of claim 31, wherein the step of generating a summary of a drillstring in each hole section of a wellbore further comprises the step of:

generating a kick tolerance associated with said drillstring.

47. (original) The program storage device of claim 32, wherein the step of generating a summary of a drillstring in each hole section of a wellbore further comprises the step of:

generating an outer diameter of a second drill collar of said drillstring.

48. (original) The program storage device of claim 47, wherein the step of generating a summary of a drillstring in each hole section of a wellbore further comprises the step of:

generating an outer diameter of a heavy weight of said drillstring.

49. (original) The program storage device of claim 48, wherein the step of generating a summary of a drillstring in each hole section of a wellbore further comprises the step of:

generating an outer diameter of a drill pipe of said drillstring.

50. (original) The program storage device of claim 49, wherein the step of generating a summary of a drillstring in each hole section of a wellbore further comprises the step of:

generating a maximum weight of a weight-on-bit in each hole section of said drill string.

51. (original) The program storage device of claim 50, wherein the step of generating a summary of a drillstring in each hole section of a wellbore further comprises the step of:

generating a weight of a first drill collar of said drillstring.

52. (original) The program storage device of claim 51, wherein the step of generating a summary of a drillstring in each hole section of a wellbore further comprises the step of:

generating a weight of a second drill collar of said drillstring.

53. (original) The program storage device of claim 52, wherein the step of generating a summary of a drillstring in each hole section of a wellbore further comprises the step of:

generating a weight of a heavy weight of said drillstring.

54. (original) The program storage device of claim 53, wherein the step of generating a summary of a drillstring in each hole section of a wellbore further comprises the step of:

generating a length of a first drill collar of said drillstring.

55. (Previously Presented) The program storage device of claim 54, wherein the step of generating a summary of a drillstring in each hole section of a wellbore further comprises the step of:

generating a length of a second drill collar of said drillstring.

56. (original) The program storage device of claim 55, wherein the step of generating a summary of a drillstring in each hole section of a wellbore further comprises the step of:

generating a length of a heavy weight of said drillstring.

57. (original) The program storage device of claim 56, wherein the step of generating a summary of a drillstring in each hole section of a wellbore further comprises the step of:

generating a length of a drill pipe of said drillstring.

58. (original) The program storage device of claim 57, wherein the step of generating a summary of a drillstring in each hole section of a wellbore further comprises the step of:

generating a tensile risk of said drillstring.

59. (original) The program storage device of claim 58, wherein the step of generating a summary of a drillstring in each hole section of a wellbore further comprises the step of:

generating a cost figure associated with said drillstring.

60. (original) The program storage device of claim 59, wherein the step of generating a summary of a drillstring in each hole section of a wellbore further comprises the step of:

generating a kick tolerance associated with said drillstring.

61. (cancelled)

62. (Currently Amended) The method of claim 1 ~~61~~, wherein the step of recording or displaying at least a portion of said summary of said drillstring in said each hole section of said wellbore on a recorder or display device is selected from a group consisting of:

recording or displaying an outer diameter of a first drill collar of said drillstring;

recording or displaying an outer diameter of a second drill collar of said drillstring;

recording or displaying an outer diameter of a heavy weight of said drillstring;

recording or displaying an outer diameter of a drill pipe of said drillstring;

recording or displaying a maximum weight of a weight-on-bit in each hole section of said drill string;

recording or displaying a weight of a first drill collar of said drillstring;

recording or displaying a weight of a second drill collar of said drillstring;

recording or displaying a weight of a heavy weight of said drillstring;

recording or displaying a length of a first drill collar of said drillstring;

recording or displaying a length of a second drill collar of said drillstring;

recording or displaying a length of a heavy weight of said drillstring;

recording or displaying a length of a drill pipe of said drillstring;

recording or displaying a tensile risk of said drillstring;

recording or displaying a cost figure associated with said drillstring; and

recording or displaying a kick tolerance associated with said drillstring.

63. (cancelled)

64. (Currently Amended) The program storage device of claim 31 ~~62~~, wherein the step of recording or displaying at least a portion of said summary of said drillstring in said each hole section of said wellbore on a recorder or display device is selected from a group consisting of:

recording or displaying an outer diameter of a first drill collar of said drillstring;

recording or displaying an outer diameter of a second drill collar of said drillstring;

recording or displaying an outer diameter of a heavy weight of said drillstring;

recording or displaying an outer diameter of a drill pipe of said drillstring;

recording or displaying a maximum weight of a weight-on-bit in each hole section of said drill string;

recording or displaying a weight of a first drill collar of said drillstring;

recording or displaying a weight of a second drill collar of said drillstring;

recording or displaying a weight of a heavy weight of said drillstring;

recording or displaying a length of a first drill collar of said drillstring;

recording or displaying a length of a second drill collar of said drillstring;

recording or displaying a length of a heavy weight of said drillstring;

recording or displaying a length of a drill pipe of said drillstring;

recording or displaying a tensile risk of said drillstring;

recording or displaying a cost figure associated with said drillstring; and

recording or displaying a kick tolerance associated with said drillstring.

65. (Currently Amended) A method practiced by a computer system of generating and recording or displaying drillstring design output data associated with a drillstring in a wellbore in response to input data including wellbore geometry and wellbore trajectory requirements, the wellbore including one or more hole sections, comprising the steps of:

generating a summary of the drillstring in each hole section of a wellbore in response to said input data, the summary providing a drillstring design for the wellbore geometry of each hole section of the wellbore, the summary of the drillstring in each hole section of said wellbore ~~being selected from a group consisting~~ including one or more of: an outer diameter of a first drill collar of said drillstring, an outer diameter of a second drill collar of said drillstring, an outer diameter of a heavy weight of said drillstring, an outer diameter of a drill pipe of said drillstring, a maximum weight of a weight-on-bit in each hole section of said drill string, a weight of a first drill collar of said drillstring, a weight of a second drill collar of said drillstring, a weight of a heavy weight of said drillstring, a

length of a first drill collar of said drillstring, a length of a second drill collar of said drillstring, a length of a heavy weight of said drillstring, a length of a drill pipe of said drillstring, a tensile risk of said drillstring, a cost figure associated with said drillstring, and a kick tolerance associated with said drillstring; and

recording or displaying said summary of said drill string in said each hole section of said wellbore.

66. (Currently Amended) A program storage device readable by a machine tangibly embodying a program of instructions executable by the machine to perform method steps which are practiced by a computer system for generating and recording or displaying drillstring design output data associated with a drillstring in a wellbore in response to input data including wellbore geometry and wellbore trajectory requirements, the wellbore including one or more hole sections, said method steps comprising:

generating a summary of the drillstring in each hole section of a wellbore in response to said input data, the summary providing a drillstring design for the wellbore geometry of each hole section of the wellbore, the summary of the drillstring in each hole section of said wellbore ~~being selected from a group consisting~~ including one or more of: an outer diameter of a first drill collar of said drillstring, an outer diameter of a second drill collar of said drillstring, an outer diameter of a heavy weight of said drillstring, an outer diameter of a drill pipe of said drillstring, a maximum weight of a weight-on-bit in each hole section of said drill string, a weight of a first drill collar of said drillstring, a weight of a second drill collar of said drillstring, a weight of a heavy weight of said drillstring, a length of a first drill collar of said drillstring, a length of a second drill collar of said drillstring, a length of a heavy weight of said drillstring, a length of a drill pipe of said drillstring, a tensile risk of said drillstring, a cost figure associated with said drillstring, and a kick tolerance associated with said drillstring; and

recording or displaying said summary of said drill string in said each hole section of said wellbore.

67. (Currently Amended) A computer system adapted for generating and recording or displaying drillstring design output data associated with a drillstring in a wellbore in response to input data including wellbore geometry and wellbore trajectory requirements, the wellbore including one or more hole sections, comprising:

apparatus adapted for generating a summary of the drillstring in each hole section of a wellbore in response to said input data, the summary providing a drillstring design for the wellbore geometry of each hole section of the wellbore, the summary of the drillstring in each hole section of said wellbore ~~being selected from a group consisting~~ including one or more of: an outer diameter of a first drill collar of said drillstring, an outer diameter of a second drill collar of said drillstring, an outer diameter of a heavy weight of said drillstring, an outer diameter of a drill pipe of said drillstring, a maximum weight of a weight-on-bit in each hole section of said drill string, a weight of a first drill collar of said drillstring, a weight of a second drill collar of said drillstring, a weight of a heavy weight of said drillstring, a length of a first drill collar of said drillstring, a length of a second drill collar of said drillstring, a length of a heavy weight of said drillstring, a length of a drill pipe of said drillstring, a tensile risk of said drillstring, a cost figure associated with said drillstring, and a kick tolerance associated with said drillstring; and

recorder or display apparatus adapted for recording or displaying said summary of said drill string in said each hole section of said wellbore.

68. (new) A method, practiced by an automatic well planning system stored in a computer system, adapted for creating a drilling operational plan, including a drillstring design, that is adapted for calculating and delivering an optimum well design in response to input data including wellbore geometry and wellbore trajectory requirements, a wellbore including one or more hole sections, comprising:

generating a drillstring design subtask, the drillstring design subtask further generating a summary of a drillstring in each hole section of a wellbore in response to said input data, the summary providing a drillstring design for the wellbore geometry of each hole section of the wellbore;

generating another subtask which is selected from a group consisting of a risk assessment subtask and a bit selection subtask; and

recording or displaying at least a portion of said summary of said drillstring in said each hole section of said wellbore on a recorder or display device.

69. (new) The method of claim 68, wherein the summary of the drillstring in each hole section of said wellbore includes one or more of: an outer diameter of a first drill collar of said drillstring, an outer diameter of a second drill collar of said drillstring, an outer diameter of a heavy weight of said drillstring, an outer diameter of a drill pipe of said drillstring, a maximum weight of a weight-on-bit in each hole section of said drill string, a weight of a first drill collar of said drillstring, a weight of a second drill collar of said drillstring, a weight of a heavy weight of said drillstring, a length of a first drill collar of said drillstring, a length of a second drill collar of said drillstring, a length of a heavy weight of said drillstring, a length of a drill pipe of said drillstring, a tensile risk of said drillstring, a cost figure associated with said drillstring, and a kick tolerance associated with said drillstring.

70. (new) A program storage device readable by a machine tangibly embodying a set of instructions executable by the machine to perform method steps, which are practiced by an automatic well planning system that is stored in a computer system, for creating a drilling operational plan, including a drillstring design, that is adapted for calculating and delivering an optimum well design in response to input data including wellbore geometry

and wellbore trajectory requirements, a wellbore including one or more hole sections, the method steps comprising:

generating a drillstring design subtask, the drillstring design subtask further generating a summary of a drillstring in each hole section of a wellbore in response to said input data, the summary providing a drillstring design for the wellbore geometry of each hole section of the wellbore;

generating another subtask which is selected from a group consisting of a risk assessment subtask and a bit selection subtask; and

recording or displaying at least a portion of said summary of said drillstring in said each hole section of said wellbore on a recorder or display device.

71. (new) The program storage device of claim 70, wherein the summary of the drillstring in each hole section of said wellbore includes one or more of: an outer diameter of a first drill collar of said drillstring, an outer diameter of a second drill collar of said drillstring, an outer diameter of a heavy weight of said drillstring, an outer diameter of a drill pipe of said drillstring, a maximum weight of a weight-on-bit in each hole section of said drill string, a weight of a first drill collar of said drillstring, a weight of a second drill collar of said drillstring, a weight of a heavy weight of said drillstring, a length of a first drill collar of said drillstring, a length of a second drill collar of said drillstring, a length of a heavy weight of said drillstring, a length of a drill pipe of said drillstring, a tensile risk of said drillstring, a cost figure associated with said drillstring, and a kick tolerance associated with said drillstring.